



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/829,368

04/22/2004

Daniel Gelbart

91506/MGB

7069

1333 7590 07/15/2008
EASTMAN KODAK COMPANY
PATENT LEGAL STAFF
343 STATE STREET
ROCHESTER, NY 14650-2201

EXAMINER

MUI, CHRISTINE T

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

07/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/829,368	Applicant(s) GELBART, DANIEL	
	Examiner CHRISTINE T. MUI	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 22 April 2008 have been fully considered but they are not persuasive.
2. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).
3. Applicant does not address the combined references, but instead addresses each individual reference. The primary reference, Wright, discloses a method of storing information within a reproduction system. The invention is applicable to the identification of documents where taggants are incorporated into marking materials used to create images that are detectable by fluoresce or by reflecting light. The primary reference does not disclose randomly distributing the taggant particles in the article. The examiner has used the secondary reference, Yasuo, to remedy the limitation of a randomly distributed particle. Yasuo discloses identifying a card by the randomly distributed ferrite particles along a detection line.
4. Applicant asserts that the Wright reference does not discuss a physical distribution of particles to identify. Wright discloses the taggants that are incorporated into marking materials are used applicable to document identification where an image is created and entered into the system by means of a taggant contained in the marking

material forming that image (see abstract, column 2, lines 41-44). Furthermore, Wright discloses the taggants that are used to mark the materials are visible such as toner, ink or marking film and may also include only material that visible in the ultraviolet or infrared portions of the light spectrum, interpreted by the examiner to be invisible to the unaided eye. The marking material container taggants that are applied to a substrate by any known means, which is a physical distribution of taggant particles to an article, preferably by a mechanical or electromechanical printing process such as lithography, xerography, ionography, electronic reprography, thermal transfer printing (for example by being incorporated in a thermal transfer film), ink jet printing, encapsulated marking material printing, or impact printing (for example through being incorporated into an impact printer ribbon such as a dot matrix or typewriter ribbon) (see column 3, lines 26-39). Wright discloses the taggant may be composed of material that fluoresces or reflects light of visible or 'invisible' wavelength (see column 5, lines 54-58), but this is considered to be a way of illuminating an image, so that an individual is able to identify the taggant based on the image reflected or fluoresces by means of an 'invisible' wavelength.

5. Applicant asserts that the Yasuo reference does not describe imaging of a distribution. Yasuo discloses imaging the location the ferrite particles on a card along the detection line P by a scanning means. The output of the loop coupling loop and the coaxial resonator output the magnetic pattern particular to the card according to the arrangement state of the ferrite powder (see [0012, 0013]). A distribution is an arrangement of articles, in this case ferrite particles on a detection line P. Even though

Yasuo uses the word pattern, the distribution or arrangement of ferrite particles on the detection line used to identify a particular card based on the distribution of randomly dispersed particles is considered to be equivalent.

6. Applicant asserts the Yasuo reference does not disclose discerning individual taggant particles. Yasuo discloses imaging the location the ferrite particles on a card along the detection line P by a scanning means. The output of the loop coupling loop and the coaxial resonator output the magnetic pattern particular to the card according to the arrangement state of the ferrite powder (see [0012, 0013]). It can be understood that upon scanning of the detection line P for ferrite particles, each individual particle is observed by its particular placement along line P and observed through a password waveform chart as seen in drawing 3 (see [0013]). It is interpreted by the examiner that the waveform is a representation of each individual particle along detection line P that differentiates each of the cards by the placement of randomly distributed particles along the line.

7. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., radiation) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

8. The claimed invention is directed to a method of authentication by detecting randomly distributed taggants. The invention is absent of using radiation as a means for detection in the cited claims.

Art Unit: 1797

9. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the claimed invention is directed to a method for detecting randomly distributed taggants or particles that invisible to the unaided eye. Both references Wright and Yasuo disclose methods for identifying particles in an article or object. The claimed invention is absent in limiting the type of identification that is able to be used in an authentication method.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,225,900 to Wright, and further in view of Machine Translation of JP 8-194791 to Yasuo (herein referred 'Yasuo').

4. Regarding claims 1-3, 6-7 and 9-10, the reference Wright discloses a method of storing information within a reproduction system. The invention is applicable to the identification of documents where taggants are incorporated into marking materials used to create images. The reproduction system obtains information from an image on a document entered into the system by means of a taggant contained in the marking material that forms an image. A scanner (camera) is provided to produce an image of the taggant. The scanner is incorporated into an electronic reprographic system that permits the image signals to be manipulated in numerous ways. Marking material may include visible material such as toner, ink or marking film that may be blended as an additive or be chemically or physically bonded to one of the constituent materials in the toner or ink (printing ink). They may also include materials which are visible only in the ultraviolet or infrared portions of the light spectrum (invisible to the unaided human eye). The taggants that are composed of a material which fluoresces or reflects light of visible or 'invisible' wavelengths would fluoresce or reflect in the IR or UV wavelengths. The marking materials may be applied to the substrate by ink jet printing, encapsulated marking material printing or impact printing. Within the scope of the invention, a "taggant" is defined as an additive to the marking material which can be combined with a marking material composition and is selectively detectable independently from the primary colorant of the marking (tagging an item). The taggants applied to the marking

materials respond to an external stimulus (means of making taggant detectable) in a way that can be specifically recognized by a reproduction system (verifying), for example they may emit light at a certain wavelength band, preferably a narrow band in a near ultraviolet or near infrared portion of the light spectrum, upon exposure to white, ultraviolet or infrared light. When a taggant fluoresces or reflects light at a predetermined wavelength, the output light for each taggant can be detected and the presence or absence of the taggant can be determined. The detected taggant wavelengths is compared to a table containing a plurality of taggant wavelengths and associated information (verifying) maintained that may include the identity of toners, inks or marking films that contain the spectral response of colorants, various types of instructional information for the reproduction system or text of an item or annotation or mark of the item used as an identifier (registration feature). The system can then recognize the emitted light and through information programmed into its memory, which comprises of a Random Access Memory or RAM relating to that marking material to perform various functions such as identify the material or text of a document and annotations on the document that can be separately identified as part of the document (see abstract, column 3, line 12-39, column 5, line 33-column 6, line 3, column 6, lines 38-63, column 8, lines 25-59, column 11, lines 15-19). It is interpreted by the examiner that the toner, ink or marking film that is fluoresced at specific wavelengths is a form of marking the material where the taggant is physically or chemically bonded with the item or document. Furthermore, it can be interpreted that when the taggant is physically or chemically bonded with the item the taggant can be arranged in a random or aligned

distribution. Wright does not specifically disclose marking the material with a taggant in a random distribution. Yasuo discloses a two dimensional code system where a code card is filled with ferrite magnetic powder and grain at random to make the magnetic pattern of each card different from each other. The card is scanned by a semi-coaxial resonator to detect a characteristic magnetic patten and the patten is converted into a digital signal to be a password by means of an A/D conversion circuit. The data is then ciphered with the password by a coding generation circuit and written in the card by a thermosensitive recording head. When the card is being read, the magnetic patten is detected from a detection line to obtain the password and at the time of non-coincidence as the result of collation, the card is determined to be authorized (see abstract, [0008, 0009, 0013-0019]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to not just mark the material or item with a taggant but mark it with a random distribution of a taggants to uniquely mark and identify the item so that upon identification, there is only one item with a unique distribution of taggants on the item.

5. Regarding claims 4-5, the reference Wright and Yasuo disclose the claimed invention. Wright discloses the printing system has a scanner section that incorporates a transparent platen, lens and mirrors to cooperate to focus an array on a line-like segment of the platen and the document being scanned thereon (invariant placement). The taggant scanner could include a broad wavelength illumination source with a narrow wavelength filter for each taggant to be detected or could include at least one narrow wavelength illumination source (tolerant to errors) and at least one specific

wavelength sensor (see column 9, lines 15-47). It is interpreted by the examiner that the platen and the document being scanned in the scanner section are located a fixed distance away from each other so that when scanning takes place the scanner reads the information on the document at an invariable distance. Furthermore, it is interpreted by the examiner that since the scanner is provided with an illumination source with a narrow wavelength filter for each taggant, the detector is tolerant to errors when scanning.

6. Regarding claims 8 and 11, the references Wright and Yasuo disclose the claimed invention. Wright does not disclose marking the item with a code after detecting the taggant and verifying the item at a later time by comparing a second data to a first data. Yasuo discloses the two dimensional code card is first cut from base paper which encloses ferrite magnetism powder at a random distribution on the card. The card is horizontally scanned with the half-coaxial resonator toward the direction of movement of a card from a predetermined position which shows the position of the predetermined detection line decided by the system. Since there is a magnetic pattern on the card, this sets a password as a key number to mark the generating circuit (marking the item with a code related to first data). The code data in the form of 3 characters is recorded and information such as the amount of money on the card is coded and written in an initial code area by the thermal recording head. The card reading machine obtains predetermined position of a card from the system in which the position of the detection line is shown. A scan of the predetermined detection line is performed (generating second data) and the password from the magnetic pattern is

asked for. Password collation of decoding of the conventional card reading machine and the recorded data read with the optical reading head of the composition is performed using the password and if decoding is possible where the passwords match (comparing data), meaning the pattern of magnetic particles is the same, verification of a valid card is used, otherwise, this is an indication that is a forged or different card (see [0015-0019]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to mark the item, in this case with a unique password, correlated to a particular set of data points or pattern on the card creating a first set of data points and then later performing a second scan creating a second set of data points to verify the validity of the same card at a different time to ensure the authenticity of the card.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE T. MUI whose telephone number is (571)270-3243. The examiner can normally be reached on Monday-Thursday 7-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CTM

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797